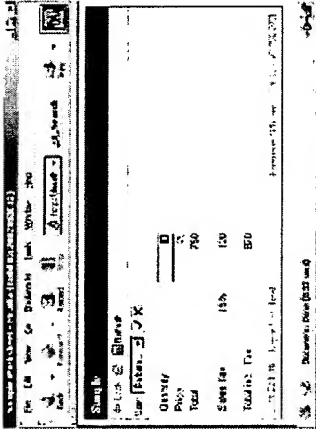
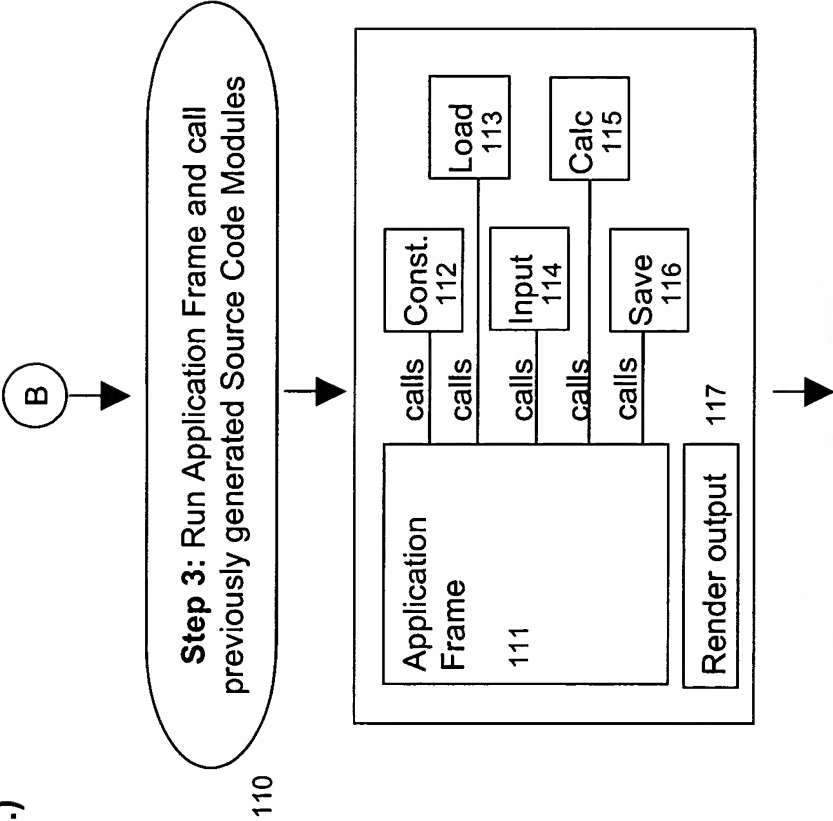


Fig. 1a



118

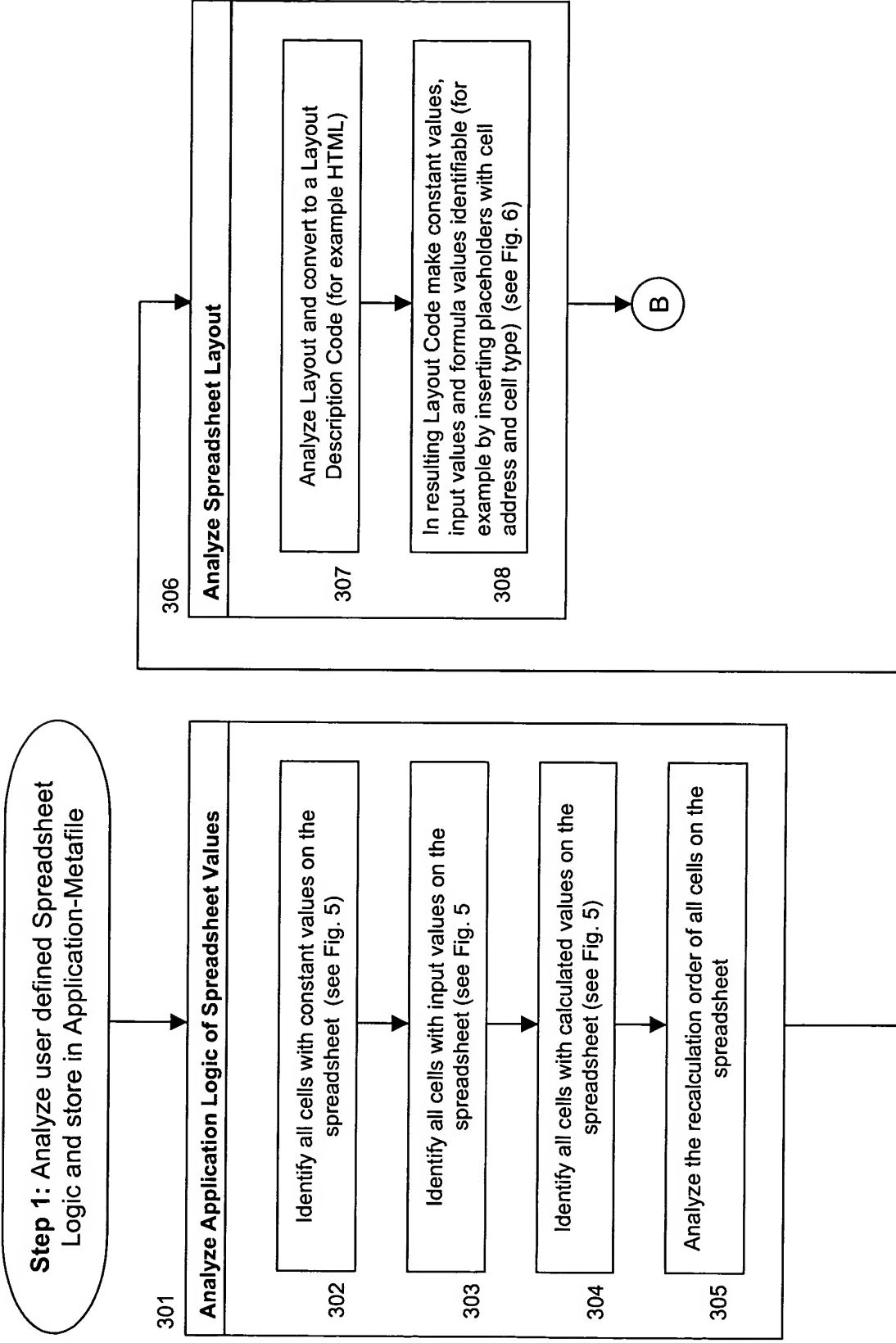
Fig. 1b

Generated Internet Application

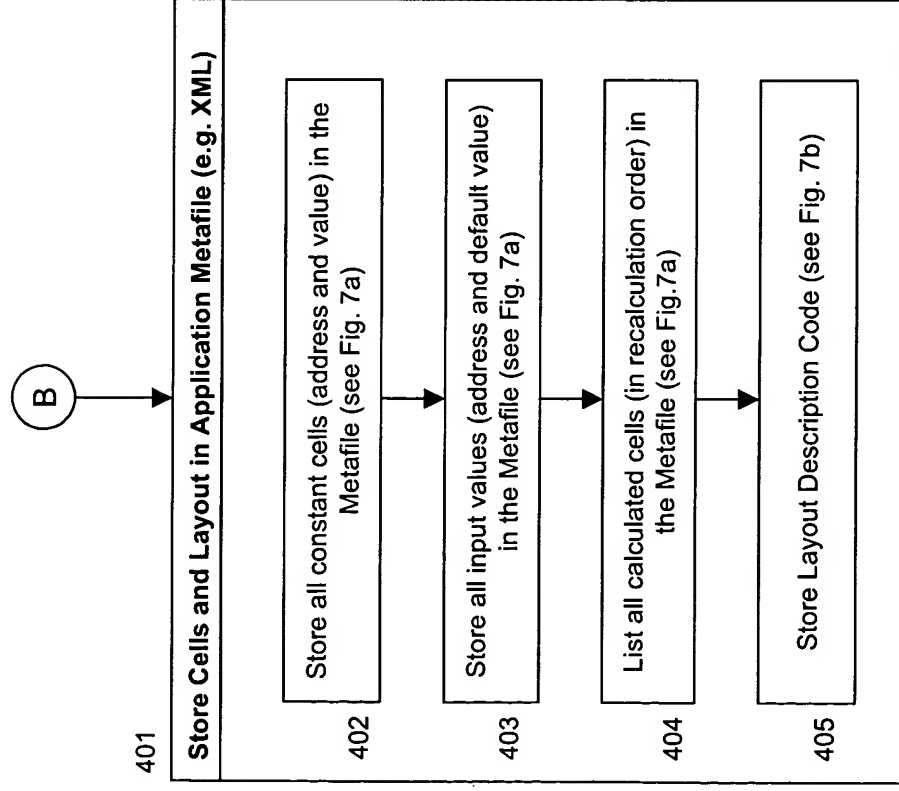
Sample Spreadsheet

	A	B	C	D
1	Quantity		10	
2	Price		25	
3	Total		250	
4				
5	Sales Tax	6%	40	
6				
7	Total Inc Tax		290	
8				

Fig. 2



**Fig. 3**



**Fig. 4**

Cell Types on the Sample Spreadsheet

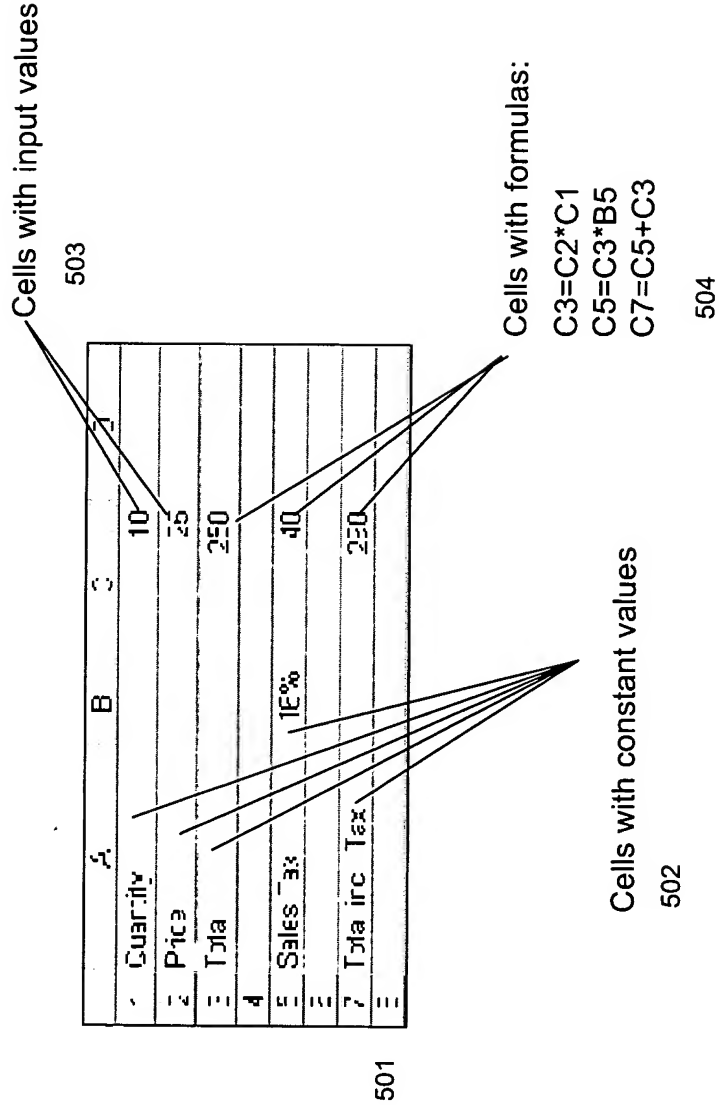


Fig. 5

# Layout Description Code for Sample Spreadsheet (HTML)

```

1 <table>
2 <col width=100>
3 <col width=40>
4 <col width=80>
5 <tr>
6 <td id='A1'></td>
7 <td></td>
8 <td id='C1'></td>
9 </tr>
10 <tr>
11 <td id='A2'></td>
12 <td></td>
13 <td id='C2'></td>
14 </tr>
15 <tr>
16 <td id='A3'></td>
17 <td></td>
18 <td id='C3'></td>
19 </tr>
20 ...
21 ...
22 ...
23 <tr>
24 <td id='A7'></td>
25 <td></td>
26 <td id='C7'></td>
27 </tr>
28 </table>

```

Fig. 6

## Application Metafile

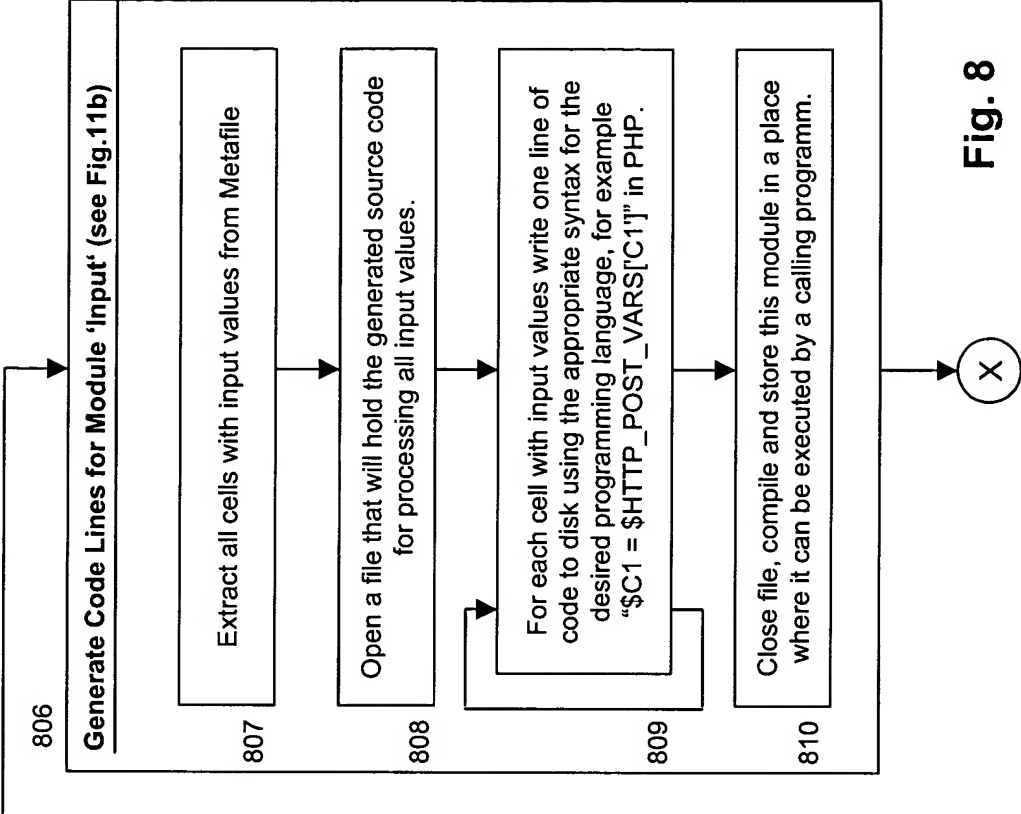
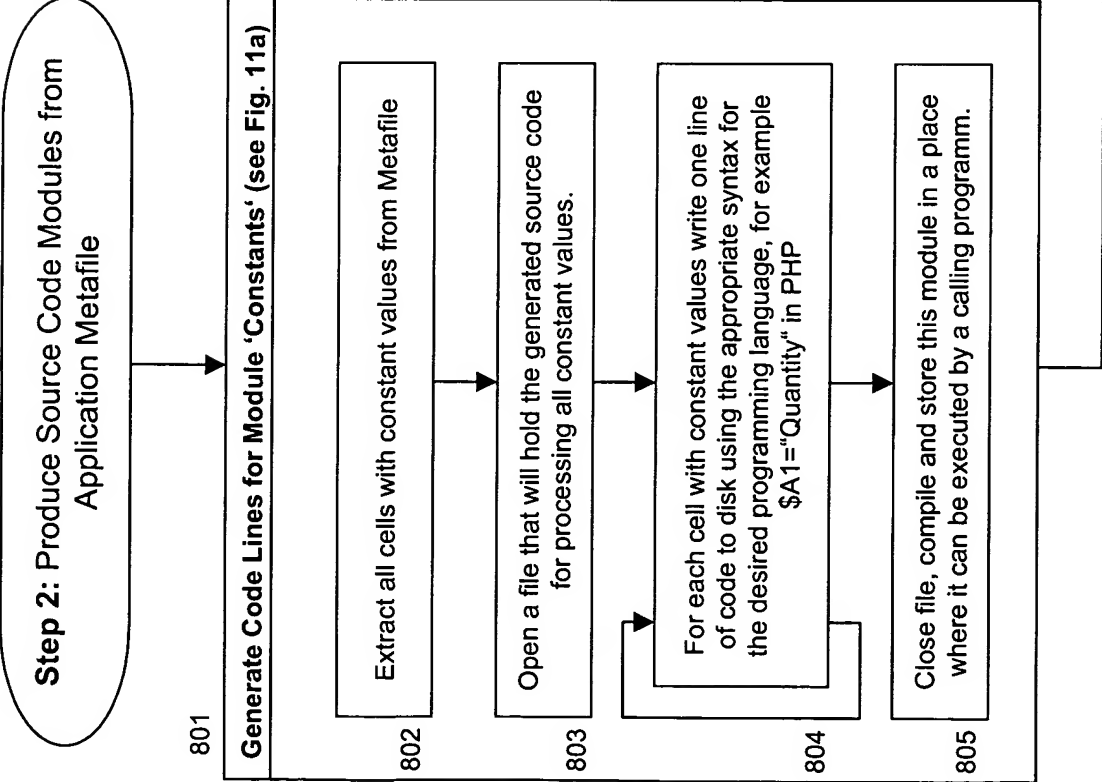
with Spreadsheet Logic and Layout for Sample Spreadsheet (XML)

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<Workbook Name="simple">
701   <ConstCells>
      <ConstCell Name="A1">Quantity</ConstCell>
      <ConstCell Name="A2">Price</ConstCell>
      <ConstCell Name="A3">Total</ConstCell>
      <ConstCell Name="A5">Sales Tax</ConstCell>
      <ConstCell Name="B5">0.16</ConstCell>
      <ConstCell Name="A7">Total incl. Tax</ConstCell>
    </ConstCells>
702   <InputCells>
      <InputCell Name="C1">10</InputCell>
      <InputCell Name="C2">25</InputCell>
    </InputCells>
703   <CalcCells>
      - <CalcCell Name="C3">
          <![CDATA[ $C2*$C1 ]]>
        </CalcCell>
      <CalcCell Name="C5">
          <![CDATA[ $C3*$B5 ]]>
        </CalcCell>
      - <CalcCell Name="C7">
          <![CDATA[ $C5+$C3 ]]>
        </CalcCell>
      </CalcCells>
    + <Worksheets>
      </Workbook>
```

Fig. 7a

```
- </Worksheets>
  - <Worksheet Name="Table1">
704    <SheetHTML>
      - <![CDATA[
          <table>
            <col width=11>
            <col width=40>
            <col width=40>
            <tr>
              <td id="A1"></td>
              <td></td>
              <td id="C1"></td>
            </tr>
            ...
            <tr>
              <td id="A7"></td>
              <td id="C7"></td>
            </tr>
          </table>
        ]]>
      </SheetHTML>
    </Worksheet>
  </Worksheets>
```

Fig. 7b



**Fig. 8**

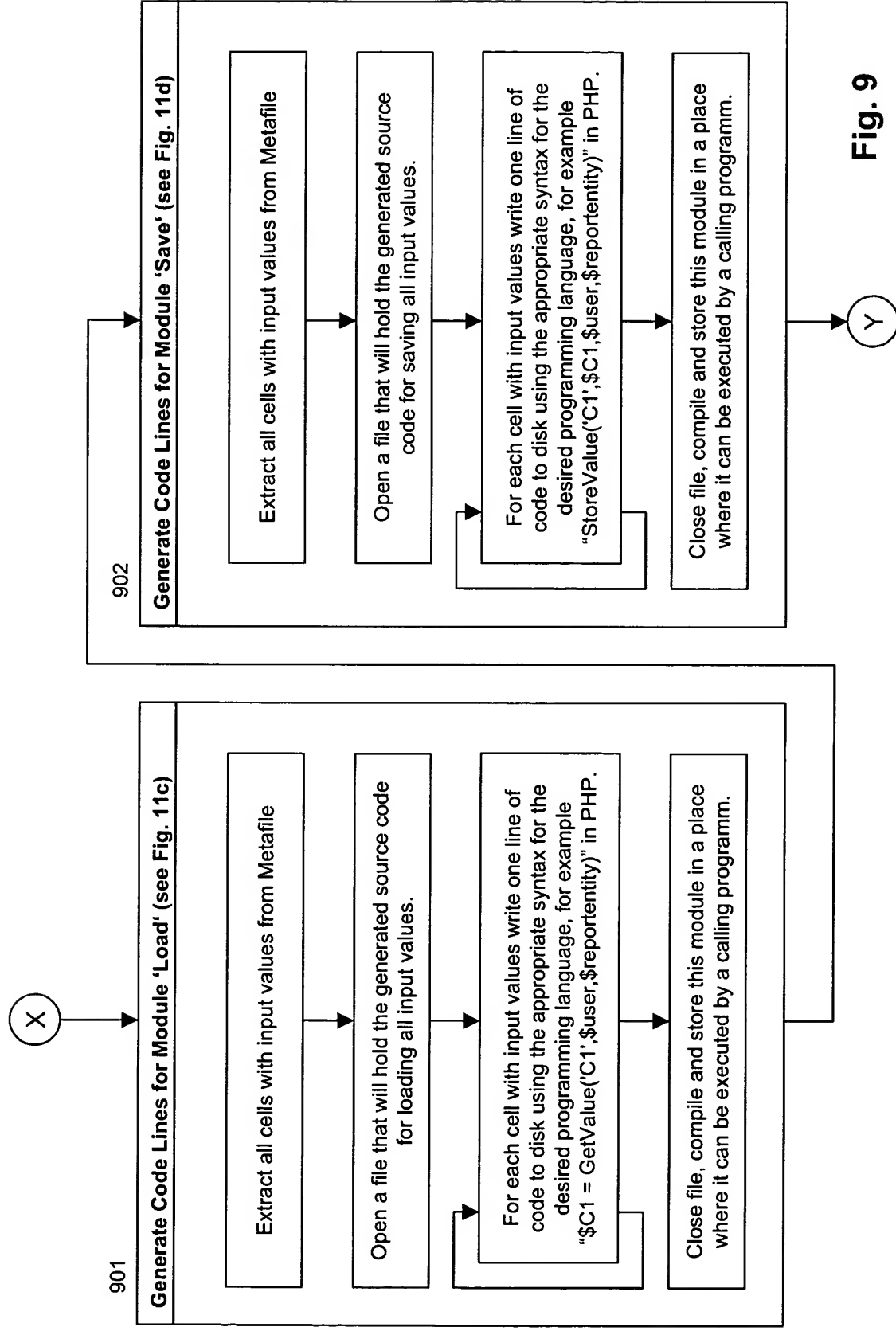


Fig. 9

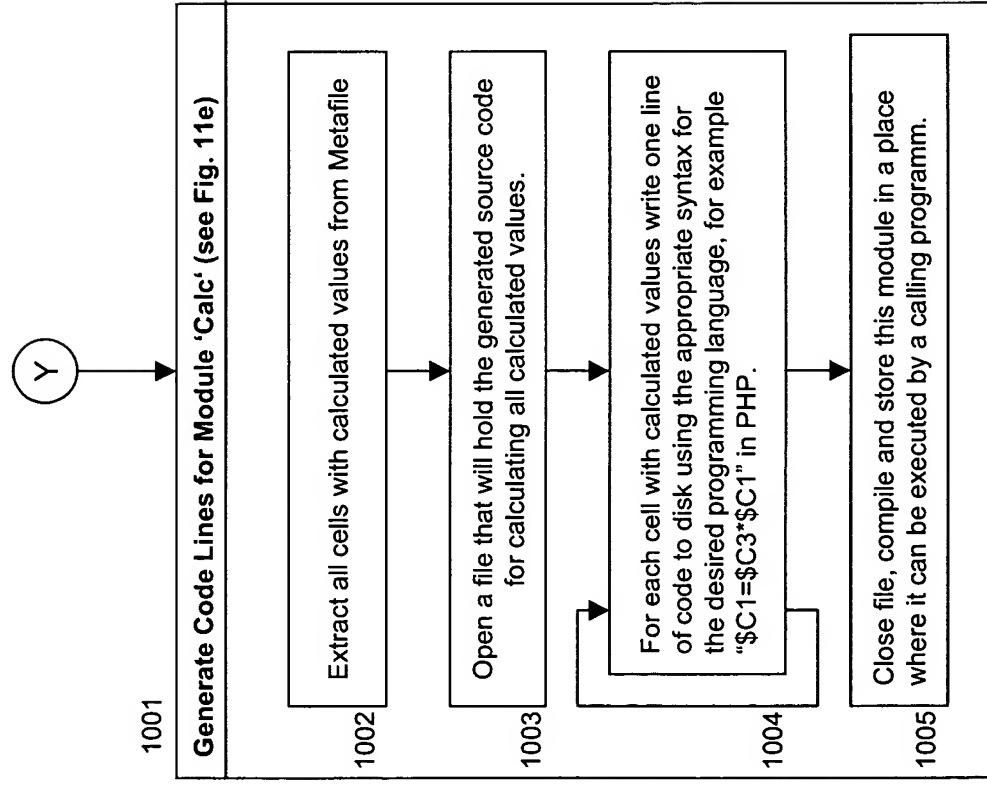


Fig. 10

**Example for generated Code Modules while processing the Application Metafile from the Sample Spreadsheet**

**Generated Code in Module 'Constants' for the Sample Spreadsheet (HTML)**

```
1  $a1 = 'Quantity';
2  $a2 = 'Price';
3  $a3 = 'Total';
4  $a5 = 'Sales Tax';
5  $E5 = 0.16;
6  $a7 = 'Total incl. Tax';
```

**Fig. 11a**

**Generated Code in Module 'Input' for the Sample Spreadsheet (HTML)**

```
1  $C1 = $HTTP_POST_VARS['C1'];
2  $C2 = $HTTP_POST_VARS['C2'];
```

**Fig. 11b**

**Generated Code in Module 'Load' for the Sample Spreadsheet (HTML)**

```
1  $C1 = GetValue('C1',$user,$reportentity);
2  $C2 = GetValue('C2',$user,$reportentity);
```

**Fig. 11c**

**Generated Code in Module 'Save' for the Sample Spreadsheet (HTML)**

```
1  StoreValue('C1',$C1,$user,$reportentity);
2  StoreValue('C2',$C2,$user,$reportentity);
```

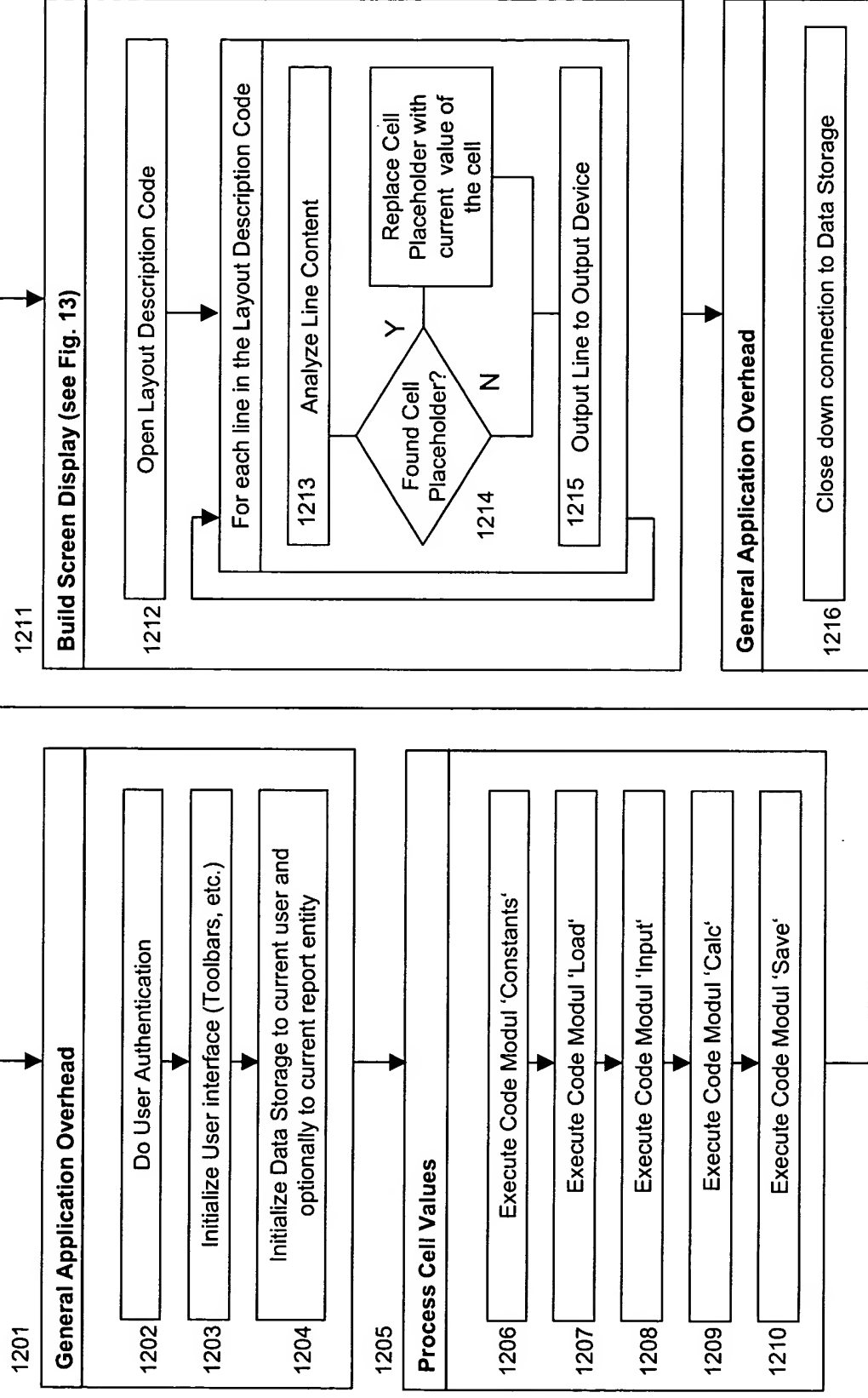
**Fig. 11d**

**Generated Code in Module 'Calc' for the Sample Spreadsheet (HTML)**

```
1  $C3 = $C2*$C1;
2  $C5 = $C3*$E5;
```

**Fig. 11e**

**Step 3: Run Application Frame and call  
previously generated Source Code Modules**



**Fig. 12**

Resulting Application (Running in an Internet Browser)

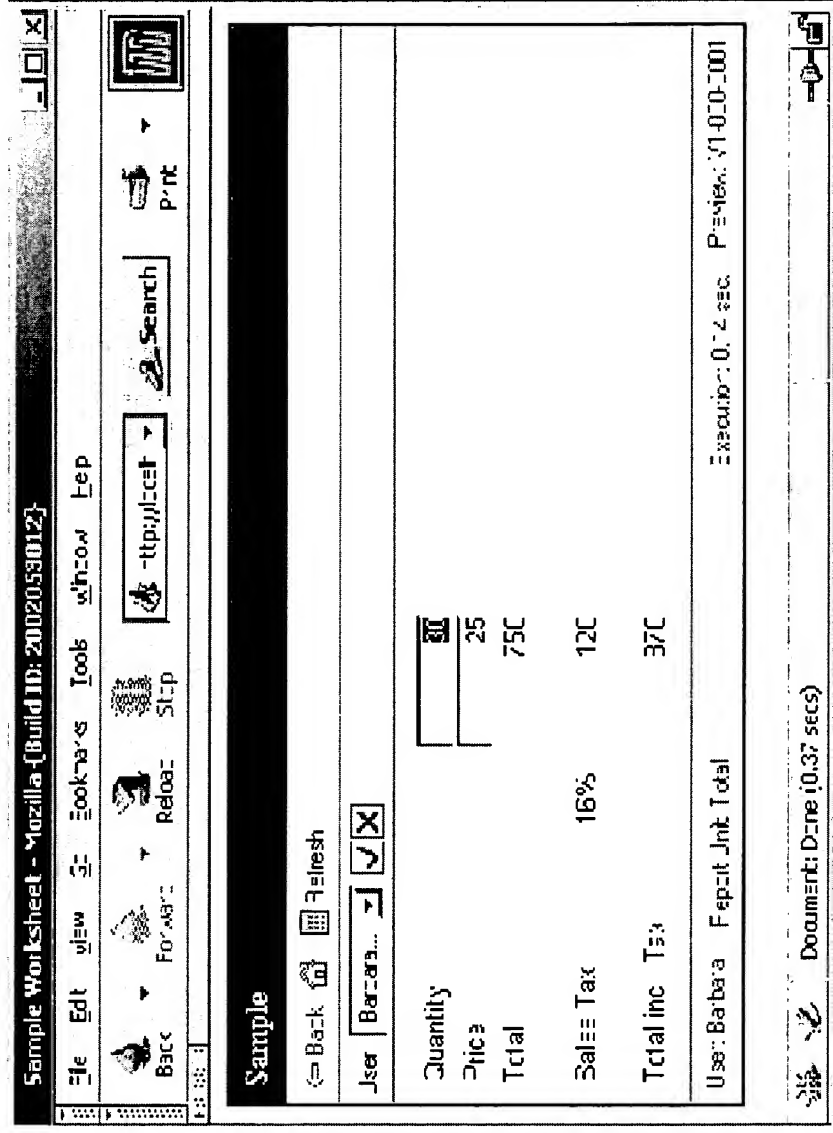


Fig. 13